



## NLPR: Call for Papers Special Issue “Multilingual Approaches to NLP”

### Guest Editors

Johannes Bjerva - Aalborg University Copenhagen, Denmark

Miryam de Lhoneux - Uppsala University, Sweden

Taraka Rama - University of North Texas, USA

Ekaterina Vylomova - The University of Melbourne, Australia

Robert Östling - Stockholm University, Sweden

### Aims and Scope

Multilingual approaches to natural language processing (NLP) have become increasingly popular with the field's growing awareness of the limitations of monolingual approaches, and the realisation that a single language can never be representative for the whole world's linguistic diversity. One constant obstacle to multilingual NLP, is the access to sufficient labelled data in low-resource languages. This is partially alleviated by multilingual resources such as the Universal Dependencies, and Unimorph. A growing body of work has focused on transfer learning methods which often use data from relatively high-resource languages, for low-resource ones. This approach is crucial to the success of NLP for low-resource languages, as it is unfeasible to obtain labelled data for all languages in the world. Furthermore, even high-resource languages may benefit from multilingual transfer from other languages.

For this special issue, papers on all aspects of multilingual approaches to NLP are welcome, especially the approaches which make use of linguistic typology, for instance by parameter sharing between languages which have typological commonalities, typologically inspired machine learning architectures, multilingual resource development, multilingual transfer learning, etc. We welcome papers of various types, e.g. **Research Article, Review Article, Perspective and Correspondence**. A list of topics of interest can be seen below.

### Main Topics and Quality Control

Main topics include, but are not limited to:

- Multilingual NLP
- Language-independent training, architecture design, and hyperparameter tuning.
- Integration of typological features in multilingual learning
- Typologically inspired NLP architectures
- Cross-lingual transfer
- Low-resource NLP



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- Linguistic Diversity and Fairness
- Interpretability of Multilingual Models
- Evaluation of language-independent methods
- Adaptation of monolingual methods to cross-lingual settings
- Construction / annotation of multilingual resources
- Techniques for simultaneous modelling of several languages

Full papers will be subject to a strict review procedure for final selection to this special issue based on the following criteria:

1. Quality and originality in theory and methodology of the special issue.
2. Relevance to the topic of the special issue.
3. Application orientation which exhibits originality.
4. If there is an implementation, the details of the implementation must be provided.
5. Extended papers must contain at least 40% new material (qualitative) relative to the conference paper.

### Important Dates

**Submission of papers:** **15 May 2021**

**Note:** This special issue applies a rolling publication principle. Accepted articles are hence published as soon as they are ready.

### Submit Your Paper

All papers have to be submitted via the Editorial Manager online submission and peer review system. Instructions will be provided on screen and you will be stepwise guided through the process of uploading all the relevant article details and files associated with your submission. All manuscripts must be in the English language.

To access the online submission site for the journal, please visit <https://www.editorialmanager.com/nlpr/default.aspx>. Note that if this is the first time that you submit to the Natural Language Processing Research, you need to register as a user of the system first.

**Note:** Before submitting your paper, please make sure to review the journal's [Author Guidelines](#) first.



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### Introduction of the Guest Editor(s)

#### **Johannes Bjerva**

Dr. Johannes Bjerva is a tenure-track assistant professor at the Department of Computer Science, Aalborg University (Campus Copenhagen), Denmark. He has served as area chair for EACL-21, and has published in top-tier NLP / AI conferences and journals (e.g. ACL, EMNLP, EACL, AAAI, NAACL, CL). His research generally deals with under-resourced languages, e.g. by combining linguistic typology with parameter sharing in multilingual learning. For the past few years, he has investigated computational typology and answering typological research questions for this purpose. Most recently, he organised a shared task on the prediction of typological features in WALS, hosted by SIGTYP.



#### **Miryam de Lhoneux**

Miryam de Lhoneux is a postdoctoral researcher in Computational Linguistics. She holds an international postdoc grant for which she is affiliated with Uppsala University, the University of Copenhagen and KU Leuven. Her project is about typologically informed dependency parsing. She has worked on syntactic parsing, multilingual NLP and interpretability. She completed her PhD at Uppsala University in 2019.



#### **Taraka Rama**

Taraka Rama is an assistant professor with the Department of Linguistics, University of North Texas, USA. He has published on topics such as automated cognate detection and Bayesian phylogenetic inference as applied to linguistic data. In addition, his research development of linguistic resources such as treebanks and lexical databases for South Asian languages.





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### **Ekaterina Vylomova**

Ekaterina Vylomova is Postdoctoral Research Fellow at the University of Melbourne. Her research is focused on computational approaches to linguistic morphology and typology as well as diachronic language change. She is the president of SIGTYP, co-organized the SIGTYP 2019--2020 workshops, the SIGMORPHON 2017--2020 shared tasks on typologically diverse morphological reinflection, and the SIGTYP 2020 shared task on the prediction of typological features in WALS. In addition, she served as an area chair (for morphology, phonology, segmentation) for EMNLP'20, EACL'21, NAACL'21.



### **Robert Östling**

Robert Östling is associate professor of computational linguistics at the Department of Linguistics, Stockholm University, Sweden. He has worked on different aspects of multilingual NLP and computational typology, and is currently heading a project on typologically informed machine learning models for NLP.

